INTERNATIONAL SEARCH REPORT

International Application No T/IB2004/051931

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G02F1/1333 G02F1/1362 G02F1/1345 H05K1/00 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 GO2F H05K Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Category ° Relevant to claim No. X WO 02/45160 A (KONINKL PHILIPS ELECTRONICS 1,3,4, NV) 6 June 2002 (2002-06-06) 6-11,13,cited in the application the whole document χ US 2002/067456 A1 (TATSUMI HIRONOBU) 1,2,6, 6 June 2002 (2002-06-06) 8-10,12, 14-20 the whole document US 2002/130614 A1 (HUITEMA HJALMAR EDZER X 1,3, AYCO ET AL) 5-10,12,19 September 2002 (2002-09-19) 17,18 the whole document X EP 1 189 097 A (ALPS ELECTRIC CO LTD) 1,3,5-7, 20 March 2002 (2002-03-20) 13,17 the whole document Further documents are listed in the continuation of box C. X Patent family members are listed in annex. Special categories of cited documents: *T* later document published after the international filing date or priority date and not in conflict with the application but cited to unclerstand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention citation or other special reason (as specified) cannot be considered to involve an inventive step when the document is combined with one or more other such docu-"O" document referring to an oral disclosure, use, exhibition or other means ments, such combination being obvious to a person skilled document published prior to the international filling date but later than the priority date claimed in the art. "&" document m ember of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 9 December 2004 22/12/2004 Name and mailing address of the ISA Authorized Officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Ammerlahn, D

Fax (+31-70) 340-3016

INTERNATIONAL SEARCH REPORT

International Application No F/IB2004/051931

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT								
Category ° Ci	itation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.						
X	US 4 601 861 A (ROBERTS WILLIAM N ET AL) 22 July 1986 (1986-07-22) cited in the application the whole document	1,2,7,13						
-								
	·							
	·							

Information on patent family members

International Application No FF/IB2004/051931

Patent document cited in search report		Publication date		Patent family member(s)	-	Publication date
WO 0245160		06-06-2002	CN	1397093	 T	12-02-2003
110 OE 10 10 0	,,	30 00 200Z	WO	0245160		06-06-2002
			ΕP	1346410		24-09-2003
			JΡ	2004515017		20-05-2004
			TW	552497		11-09-2003
			ÜS	2002068389		06-06-2002
US 2002067456	A1	06-06-2002	 JP	2002131773	 -	09-05-2002
US 2002130614	A1	19-09-2002	CN.	1457450	 T	10 11 2002
03 2002130014	ΑI	19-09-2002	CN	1457450		19-11-2003
			EP	1368699		10-12-2003
			WO	02071137		12-09-2002
			JP 	2004519719	 	02-07-2004
EP 1189097	Α	20-03-2002	JP	2002090730	Α	27-03-2002
			CN	1348115		08-05-2002
			EΡ	1189097		20-03-2002
			TW	571160		11-01-2004
			ÜS	2004090574	-	13-05-2004
			US	2002054257		09-05-2002
US 4601861	Α	22-07-1986	US	4486363	^	04-12-1984
05 4001001	^	ZZ 07 1900	AU	557665		08-01-1987
			AU			
			BR	4423685		27-02-1986
				8503774		20-05-1986
			CA	1241514		06-09-1988
			DE	3580805		17-01-1991
			EP	0171975		19-02-1986
			ΙL	75659		05-11-1990
			JP	1819554		27-01-1994
			JP	5017023		08-03-1993
			JP	61047237		07-03-1986
			KR	9001960		27-03-1990
			MX	171098		29-09-1993
			ZA	8504885		25-02-1987
			DE	3332461	A1	05-04-1984
			DE	8325870	U1	20-06-1984
			GB	2127344	A,B	11-04-1984
			HK	49086		04-07-1986
			JP	1729453		29-01-1993
			ĴΡ	3043051		01-07-1991
			ĴΡ	59140021		11-08-1984
			MY	62686		31-12-1986